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10/043,738	01/09/2002	Wolfgang Brauer	Mo-6931/LeA 35,798	6549
157	7590	10/19/2004	EXAMINER	
BAYER MATERIAL SCIENCE LLC 100 BAYER ROAD PITTSBURGH, PA 15205			SERGENT, RABON A	
		ART UNIT		PAPER NUMBER
		1711		

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/043,738

Filing Date: January 09, 2002

Appellant(s): BRAUER ET AL.

James R. Franks
For Appellant

MAILED
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GROUP 1700

EXAMINER'S ANSWER

This is in response to the appeal brief filed July 26, 2004.

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(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The rejection of claims 5 and 7-11 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) ClaimsAppealed

A substantially correct copy of appealed claim 7 appears on page 8 of the Appendix to the appellant's brief. The minor errors are as follows: Within line 16 of claim 7, the

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language, “; and”, should not be present after “catalyst”.

(9) Prior Art of Record

U.S. 3,901,852	Shah	8-1975
U.S. 5,905,133	Muller et al.	5-1999

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shah ('852) in view of Muller et al. ('133).

Shah discloses a thermoplastic polyurethane derived from the reaction of a prepolymer, derived from the reaction of diisocyanate and polyether polyol, having a molecular weight of 600 to 3,000, and 1,4-di-(2,2'-hydroxyethyl)-hydroquinone, in the presence of stannous octoate, wherein the quantity of catalyst employed overlaps that claimed. See column 4, lines 6, 36, 59, and 67+; column 5; and examples within Shah. Shah further discloses that the reactants may be preheated to a temperature up to 130°C. See column 4, lines 25-28.

Though Shah discloses the production of the thermoplastic polyurethane using a prepolymer process, Shah fails to disclose specific details concerning the types of reactors used to produce the prepolymer and elastomer. However, the continuous use of static mixers or stirred tube reactors to produce polyurethane prepolymers and the subsequent continuous use of

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an extruder to produce the thermoplastic elastomer was known at the time of invention. This position is supported by the teachings of Muller et al. at column 5, lines 48-55 and column 6, lines 18-20.

Therefore, since both the primary reference and secondary reference are concerned with the production of thermoplastic polyurethanes, derived from prepolymers, the position is taken that it would have been obvious to produce the thermoplastic polyurethane of Shah using the disclosed continuous process and reactor setup of Muller et al.

Appellants have essentially set forth two arguments to rebut the *prima facie* case of obviousness. Firstly, appellants argue that Shah teaches away from the use of a prepolymer process; therefore, appellants reason that one would not be motivated to produce the composition of Shah using the prepolymer process of Muller et al. Secondly, appellants argue that the instant method is not analogous to the prepolymer method of Muller et al.; therefore, appellants argue that the combined teachings of the references would not yield appellants' method and product.

With respect to the first issue, namely that Shah teaches away from a prepolymer process, the position is taken that appellants have failed to appreciate the teachings of Shah. Though Shah discloses that the prepolymer process is less preferred, it cannot be said that Shah teaches away from the use of such a process to produce the disclosed thermoplastic polyurethanes. In fact, Shah provides an extensive discussion within column 5, lines 3-29 of how to employ a prepolymer process in the production of the polyurethanes. In light of this disclosure, it is not seen that one can equate a less preferred, though fully disclosed and enabled embodiment with a "taught away from" mode of operation or embodiment.

With respect to the second issue, namely that the instant method is not analogous to the prepolymer process of Muller et al., the position is taken that a careful analysis indicates that respective methods are, in fact, analogous. Though appellants' process is governed by the transitional language, "consisting of", the position is taken that steps A, B, and C of Muller et al. are encompassed by appellants' step (i), forming a prepolymer, and that steps D, E, and F of Muller et al. are encompassed by appellants' step (ii), reacting the prepolymer with the chain extender in an extruder. Steps A, B, and C of Muller et al. merely involve the reaction of the diisocyanate with the polyol to yield a prepolymer, and it is submitted that this is exactly what is encompassed by appellants' step (i). Steps E and F of Muller et al. merely involve the mixing and reacting of the chain extender with the prepolymer in an extruder to yield the polyurethane, and it is further submitted that this is encompassed by appellants step (ii). Finally, cooling step D of Mueller et al. is considered to be encompassed by appellants' introduction of the prepolymer into the extruder (step (ii)). It is noted that Muller et al. disclose at column 5, lines 58-60 that the processing temperature of the prepolymer may be significantly below the 190°C temperature of step D; therefore, it can be argued that step D may be unnecessary or optional. It is additionally noted that appellants provide for temperatures as low as 130°C which are substantially below the <190°C cooling temperature of Muller et al.; therefore, it can be argued that appellants' low processing temperature encompasses the result obtained by the cooling step D of Muller et al. Lastly, it is noted that Muller et al. disclose at column 5, line 66 through column 6, line 4 that the cooling step is carried out by introducing the prepolymer into the cooled extruder; therefore, it is argued that step D of Muller et al. is met by appellants' introduction of

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the reactants into the extruder at temperatures below 190°C, temperatures that are encompassed by appellants.

(11) Response to Argument

Appellants' arguments have been addressed within the ***Grounds of Rejection***.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


RABON SERGENT
PRIMARY EXAMINER

R. Sergent
October 18, 2004

Conferees:


Supervisory Patent Examiner James Seidleck


Supervisory Patent Examiner David Wu

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